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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

January 11, 1978

ACTION MEMCRANDUM

TO: AA/DS, Ms. Marjorie S. Belcher

THRU: DS/RES, Dr. Miloslav Rechcigl *geo for MR*

FROM: DS/RD, Mr. Harlan H. Hobgood *Harlan H. Hobgood*

SUBJECT: Unsolicited Research Proposal --
Professor Bruce F. Johnston, Food Research
Institute, Stanford University,
"Integrated Rural Development Strategies
and Basic Needs: A Survey of Policy
Options."

Problem: It is generally recognized that a large fraction of the population in developing countries, and especially the poor households in the countryside, have been bypassed by economic development. Trying to meet the needs of the rural poor majority has led to the conclusion that to break the apparent intractable web which holds them in poverty, interventions must combine various income production, production supporting and social service components. This attack on rural poverty is characterized as "Integrated Rural Development" (IRD).

While IRD is widely discussed, there remains little basic agreement on just how to combine various components, how to sequence or time schedule them, or how to organize and implement interventions. AID, the World Bank, and other donor agencies as well as various private commentators advance alternative strategies. As a result, there are no clear guidelines for choosing one IRD approach over another, or for distinguishing which approach to project design is particularly relevant in a given situation. Thus project designers are left pretty much at sea when it comes to formulating rural development efforts.

As a result of the proliferation of both theoretical and empirical studies of IRD, there is a need for a tightly argued, comprehensive review and evaluation of this literature which will provide AID and other rural development project designers insights into the causal relationships and other linkages among components or substrategies of IRD: income production, production support activities, and social services.

Proposal: This modest research proposal is intended to provide us with answers to the following basic issues of IRD:

- what are the basic packages of IRD components which have proven to be successful (or unsuccessful) in meeting basic human needs?
- in what combination and time sequencing does experience suggest IRD components should come on-line?
- what are the optimal ways of organizing, administering and implementing policies and programs? That is, should IRD activities be combined in a single agency? begin at the national level or at the village level? work through several single function local cadres or a single multifunction cadre?

Summary:

Title: Rural Development Strategies and Basic Needs: A Survey of Policy Options.

Time: January 1st to August 1st, 1978

Cost: \$34,958 (see attached proposal page 19 for detailed budget)

Principal Investigator: Dr. Bruce F. Johnston
Food Research Institute
Stanford University

Researchers: Dr. Johnston and Dr. Jyotirindra Das Gupta,
Department of Political Science, University
of California, Berkeley.

Project Manager: Dr. Jerry L. Weaver, DS/kD

Research Purpose and Expected Products: The purpose of this research is to provide the Agency a clearer and more concise idea of IRD strategies as means to meeting basic human needs. This is to be accomplished by a comprehensive review of official and unofficial publications relevant to the formulation of rural development strategies for developing countries. Emphasis will be placed on diagnoses and prescriptions that have been set forth relevant to conditions prevailing in mixed economies. The review will include journal papers and reports of projects prepared for the ILO, WHO, FAO, IBRD as well as AID and the academic community.

Special attention will be given to discussions of the interaction among nutrition, health, and fertility in the design of IRD projects. Here the purpose is to augment other research being conducted in the Agency on the factors which motivate couples to have smaller families and to space their children. Previous work by Dr. Johnston has focused on this vital relation -- in the present effort, the focus will be on discovering information which is directly applicable to the design of IRD projects which eventuate in optimal fertility consequences.

Particular attention will be given to summarizing the evidence on the causal relationships and other linkages between components or substrategies of IRD: for instance, the linkages among agriculture, infrastructure, and health, education and nutrition programs.

Discussion: This research is designed to provide state of the art work plus clear and concise summarization of prevailing approaches and evidence about IRD projects, and to generate a set of guidelines which will be useful for practitioners to design IRD projects. Because the work will draw on examples and theories based on a wide range of situations, its interregional nature will allow for the widest possible utility and generalization of its findings.

An important feature of this work is the ability of the principal investigator to gain access to and discuss with leaders of a number of international organizations: because of his previous work, Dr. Johnston has extremely close relations with senior members of WHO, ILO, IBRD, FAO and other staffs.

In addition, Dr. Johnston proposes to obtain the views and experience of leaders of IRD projects in the Philippines, India and Kenya. The feedback from these experts to the first draft of this paper should be extremely useful and help to isolate the most current range of thinking and experience on the issue of IRD project design.

This research proposal has been circulated in the Rural Development Offices of each of the Regional Bureaus and in the DS offices of Population, Health, and Nutrition. All who responded in writing by the deadline were extremely supportive and we have received no negative comments. PPC/PDA/SPA has endorsed strongly the proposal and has decided to disapprove a similar request from another investigator on the grounds that the Johnston effort shows superior prior work and greater promise of ultimate worth to the Agency. The comments of the reviewers have been conveyed to Dr. Johnston and will be incorporated in his workscope. (See attached comments.)

The proposal has been reviewed by DS/RD and meets the requirements of an unsolicited proposal contained under AID PR 7-4.5301(e). Therefore, it is recommended that a grant be awarded to Stanford University without consideration of other sources.

Recommendation: That you approve the research proposal on Integrated Rural Development.

Approved: Marjorie D. Belcher

Disapproved: _____

Date: April 3/1978

Attachments

Clearance: DS/PPU, R. Simpson RS date: 2/10/78

Subj. to COSPO comments dated 2/10/78

PROPOSAL

to the

AGENCY FOR INTERNATIONAL DEVELOPMENT

from the

FOOD RESEARCH INSTITUTE, STANFORD UNIVERSITY

Integrated Rural Development Strategies and Basic Needs:
A Survey of Policy Options

February 27, 1978

Bruce F. Johnston
Principal Investigator
Professor
Food Research Institute

Jon A. Erickson
Sponsored Projects Officer

Proposed Period of Study: May 1, 1978 through April 30, 1979

Amount of Contract: \$34,958

Principal Investigator: Bruce F. Johnston

Associate Investigator: Jyotirindra Das Gupta

*Review
done by
J. V. B.*

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Abstract

This is an unsolicited proposal under AID's small activities program. It is in part an outgrowth of informal discussions with the Office of Rural Development and other offices in the Technical Assistance Bureau and with the Office of Policy Development and Analysis in the Bureau for Program and Policy Coordination. The proposed research is aimed at the preparation of a "state of the art" paper that is intended to contribute to a better understanding of the difficult issues that arise in the development of AID programs that will be as effective as possible in carrying out the new congressional mandate to give high priority to "assistance to help the poor toward a better life." The principal investigator is Bruce F. Johnston and the co-investigator is Jyotirindra Das Gupta. Carl Gotsch, Dudley Kirk, Reynaldo Martorell, and Keith Taylor will assist in an advisory capacity. A draft of the paper would be discussed with appropriate persons in AID, the World Bank, IFPRI, ILO, WHO, and FAO and with a few senior officials involved in the planning process in three developing countries and with AID mission directors and staff members in those countries. The proposed dates for the project are May 1, 1978 through April 30, 1979, and the proposed cost is \$34,958.

A Research Proposal

Integrated Rural Development Strategies and Basic Needs: A Survey of Policy Options

Principal Investigator:

Bruce F. Johnston
Food Research Institute
Stanford University

Co-Investigator:

Jyotirindra Das Gupta
Department of Political Science
University of California at Berkeley

I. BACKGROUND AND JUSTIFICATION FOR THE PROPOSED SURVEY

The general awareness that a large fraction of the population in developing countries, and especially the poor households in the countryside, have been bypassed by economic development has led to a new appreciation of the fundamental importance of strategies for rural development. It is often argued that this requires an integrated approach, although there is still no general agreement concerning the definition and content of "integrated rural development." More recently, this awareness of the persistence of poverty has given rise to a growing interest in a "basic needs approach," although again there is little agreement as to how the concept is to be interpreted or applied.

This concern with the widespread and persistent problems of poverty is now embodied in the congressional legislation authorizing U.S. development assistance programs. Thus the International Development and Food Assistance Act of 1977 (PL 95-88, August 3, 1977) stipulates that development assistance "shall be increasingly concentrated in countries which will make the most effective use of such assistance to help the poor toward a better life."

The increased concern in the United States with the problems of eliminating absolute poverty in the developing countries has been paralleled by increased attention to those problems on the part of the World Bank and

other international agencies and an increasing number of developed and developing countries (1).¹ The basic document prepared by the ILO Secretariat for the World Employment Conference held in June 1976 outlined a basic needs strategy against rural poverty which has been followed by a number of other ILO and World Bank papers elaborating on such an approach (2). It is worth recalling that explicit concern with poverty and basic needs was a major concern in India and a number of other developing countries long before the current international focus on these issues (3). Thus it is too facile to conclude that the limited progress achieved to date is to be attributed primarily to a lack of awareness of the severity of poverty.

There is general recognition that a country's strategies for agricultural and rural development are of central importance because the poor are concentrated mainly in rural areas and also because adequate food supplies and improved nutrition are such basic requirements for improving the living conditions of poor households. But beyond that there is only limited agreement concerning the type of agricultural or rural development strategies that are likely to be most feasible and effective in achieving the goal of reducing poverty. In particular, there is considerable disagreement concerning the appropriate balance between measures directed mainly at increasing agricultural output and the provision of social services or other interventions aimed directly at satisfying basic human needs.² Some

¹See pages 15 to 18 for notes and references.

²The question of determining an appropriate balance between the objectives of (1) increasing agricultural production and (2) improving and enlarging health, nutrition, family planning, and education services have received thoughtful attention in two recent AID policy papers (4).

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of the more recent statements on basic needs seem to subsume rural development under a "basic needs strategy," but remarkably little attention has been given to the relationship between such a strategy and the set of policies and programs related to income generation and social services to be included within a strategy for rural development.

Given this ferment of ideas and proposals, the U.S. government, and especially AID, will inevitably be involved in multilateral and bilateral discussions concerning rural development and basic needs strategies.¹ Of more immediate concern, AID/Washington and the country missions are currently endeavoring to develop aid programs that will be as effective as possible in carrying out the new congressional mandate. There would seem to be a major need for a "state of the art" paper to review and evaluate the major ideas and proposals that have been advanced pertaining to rural development strategies with major emphasis on their implications with respect to the satisfaction of basic needs.

II. THE PROPOSED SURVEY OF POLICY OPTIONS

The first and most obvious need is to review a number of the more important official and unofficial publications relevant to the formulation of rural development strategies and the choice of measures aimed at the satisfaction of basic needs. The emphasis will be on diagnoses and prescriptions that have been set forth that are relevant to conditions prevailing in mixed economies, although attention will also be given to

¹The Overseas Development Council, for example, has proposed that the U.S. government should take the initiative in proposing that the OECD member countries should formulate a proposal for an expanded program of foreign assistance oriented toward a basic needs approach (5).

lessons to be derived from China's experience. Surveys of research published in 1970 and 1977 by the principal investigator give an indication of the literature and range of issues to be examined (6). The present survey of alternative strategies for rural development and meeting basic needs will, however, be more comprehensive and focus more heavily on policy options. Considerable attention will also be given to recent papers prepared in the ILO and World Bank which set forth the advantages and distinctive features of a basic needs approach (7).

Although there is agreement concerning the need to give explicit attention to development objectives additional to the traditional pre-occupation with maximizing growth of GNP, the problem of reaching consensus with respect to the type of strategies that are likely to be most effective in reducing rural poverty remains acute. One important viewpoint, well illustrated by Little, Scitovsky, and Scott (8) and Mellor (9), argues that the failure of growth to bring more widespread benefits in reducing poverty has been due to an inappropriate pattern of growth (10). Similarly, the ILO employment missions have placed major emphasis on the importance of rapid expansion of employment opportunities to provide the widespread growth of income required to support more adequate levels of consumption among poor households (11). Other writers, most notably Michael Lipton (12), have placed major emphasis on a pervasive tendency to deprive the rural sector of the resources required for vigorous and widespread growth of income-earning opportunities because of the "urban bias" that distorts policy decisions in many less developed countries. Other students of rural development, including Hayami and Ruttan and Boyce and Evenson, have placed particular emphasis on the tendency to underinvest in the agricultural

research required to provide the technical base for increases in farm productivity and output (13). Still others, such as Guy Hunter, Robert Chambers, and Uma Lele, have stressed deficiencies in agricultural administration and inadequate attention to devising procedures to insure effective implementation of agricultural programs (14).

The influential volume, Redistribution with Growth, prepared by the World Bank and the Institute of Development Studies at the University of Sussex, however, places major emphasis on the need to redistribute both assets (especially land) and current income to specific target groups (15). Increased awareness of the extent of under- and malnutrition had earlier directed attention to the possibility of emphasizing nutrition intervention programs to alleviate that especially serious manifestation of poverty (16). Still more recently, the literature on basic needs has argued that development programs should be oriented primarily toward households falling below a poverty line to enable them to satisfy basic needs defined to include not only nutrition but also education, health, safe and adequate water supplies, housing, clothing, and even public transportation. An important contribution of the literature on basic needs is in focusing attention on the fact that health care and other social services can make a highly significant contribution to the reduction of poverty which supplements and reinforces the improvement in living conditions associated with rising per capita incomes. A final point of view that will merit attention stresses the importance of interactions between nutrition, health, and child spacing and therefore argues that an extremely high priority should be given to the design and implementation of integrated programs capable of achieving wide coverage of rural areas in the delivery of a "composite package" of nutrition, health and family planning services (17).

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This proposed survey of the literature will give particular attention to the causal relationships and other linkages between the various components or substrategies which constitute a rural development strategy. Lele (18) and others have stressed the importance of a proper time sequencing in the allocation of resources for the purpose of increasing agricultural output and for the expansion of social services such as education or health and nutrition programs. It is evident that there are many important linkages between various components of a rural development strategy. On the basis of his experience with integrated rural development planning in Tanzania, Belshaw (19) has argued that regional planning should be concerned with three subsystems: (1) a production infrastructure subsystem including institutions for agricultural research and extension as well as physical investment in irrigation and drainage; (2) an exchange subsystem including the rural road network and transport services as well as facilities and institutions for a wide range of supporting services including credit, marketing and processing, supply of inputs, and communications; and (3) a social welfare subsystem including education, health and nutrition services, family planning, water supplies, housing, and the maintenance of law and order. Promotion of rural-based industries, an important component of a rural development strategy, will be influenced by measures to strengthen the exchange subsystem as well as the production infrastructure, e.g., rural electrification.

Such a listing of the components of a rural development strategy directs attention to the importance of maintaining an appropriate balance among various components and insuring that rural development is "integrated" in the sense that essential components are not neglected. At the same time,

it emphasizes the need to make difficult choices with respect to priorities and time sequencing because of the manpower, financial, and organizational constraints which limit what is feasible at a particular point in time. An important objective of development is to gradually ease the severity of those constraints, e.g., by strengthening the organizational capacities available at the national, regional, district, and village levels. Nevertheless, it is essential to recognize that the coordination required to integrate administratively a set of activities is time consuming and imposes heavy demands on the limited administrative capacity that is available for the design and implementation of rural development programs.

The major contributions to the literature on rural development strategies and basic needs will be assessed in relation to a number of key questions. It is not possible at this time to give a complete list, but it is useful to suggest a number of questions pertinent to (1) the identification of the components of a rural development strategy, (2) the combination and time sequencing of those components, and (3) the design and implementation of the policies and programs which comprise a country's rural development strategy.

Identification of components.--Which components of a rural development strategy merit priority in countries at different stages of development? What criteria are most useful in determining the priority to be given to various income-generating activities and to social services in a poverty-oriented approach to rural development? To what extent are efforts to reduce poverty by influencing the pattern of agricultural development complementary to direct interventions to alleviate poverty and how important are the trade-offs that arise because of competition for scarce resources?

Combining components.--To what extent is it feasible and desirable to carry out national or regional planning of "integrated rural development" for the purpose of assessing linkages among essential components and determining their time sequencing? To what extent is it feasible and cost effective for certain components of a rural development strategy to be integrated administratively? What are the advantages and disadvantages of supplementary strategies (i) focused on a particular manifestation of poverty such as malnutrition, (ii) directed toward a somewhat broader range of activities such as health, nutritional improvement, and family planning, or (iii) with a more general orientation toward basic needs? If it is considered desirable to attempt to formulate a "basic needs strategy," how would that strategy be related to a strategy for rural development? Or would it be more productive to approach the question of basic needs by assessing rural development strategies and substrategies in terms of their contribution to satisfying basic needs?

Decision-making and implementation.--What types of rural development policies and programs have been able to achieve their objectives and what have been the weak points that have been major obstacles to decision-making and to implementation? In what ways should the choice of strategies for rural development be influenced by factors that influence the administrative workability of alternative strategies? What generalizations can be made with respect to the problems of achieving a workable consensus and mobilizing political support for alternative strategies? How are the problems of administrative workability and political feasibility affected by the range of components included in a rural development strategy and by the extent to which programs are directed at multiple objectives such as health,

nutrition, and family planning? What is the appropriate role of foreign assistance programs in strengthening the commitment and the capacity of governments in developing countries to pursue strategies that are effective in reducing rural poverty? What types of rural development strategies or substrategies offer promise in strengthening local participation at the village level in planning and implementing programs to alleviate poverty and promote other development objectives?

Although it is essential to have in mind this broad range of questions, it will clearly be necessary to be selective about the key issues that will receive priority. We plan to focus particularly on the appropriate balance between measures aimed at increasing agricultural output--or income generation generally--and programs to provide social services or other interventions aimed directly at satisfying basic needs. To arrive at a better understanding of that difficult issue will require the formulation of criteria for determining priorities that are reasonable and capable of gaining acceptance by policymakers. The relevant priorities will relate, however, to time sequencing and to the type and level of resource commitments to various activities as well as to decisions about whether particular programs should be included or excluded. This calls for careful attention to evidence concerning the importance of linkages or positive interactions among particular sets of activities as well as the more usual questions related to competition for scarce financial and administrative resources. This will also involve an assessment of the more important causal relationships among the various components of a rural development strategy and of complementarities between investments in directly productive activities and in human capital.

We are keenly aware of the need for a more extended study with provision for field visits to study various types of integrated rural development programs, the decision-making environment as it affects the adoption or expansion of such programs, and the attitudes of decision-makers with respect to various components and composite package programs. A systematic and critical analysis of the available literature can, however, make a timely contribution to the better understanding of these issues that is needed to assist the ongoing programming activities of the Office of Rural Development and other AID units in Washington and in the field. The practical value of an analysis of these issues based on a review of the literature can, however, be enhanced by examining the explicit and implicit priorities and time-phasing of activities reflected in the rural development strategies pursued in a few selected countries. To make this study manageable we propose to focus mainly on experience in three countries as described in the following section.

III. TIMETABLE AND PLAN OF WORK

The research and preparation of a state of the art paper on "Rural Development Strategies and Basic Needs: A Survey of Policy and Options" would be carried out between May 1, 1978 and April 30, 1979. A "semi-final draft" of the paper, which we estimate will be about 100 typescript pages, would be submitted to AID in February or March to allow time for a final round of comments and suggestions from Agency staff members before completing the final version of the paper.

The review of the literature would be carried out at Stanford and the University of California, Berkeley, but we attach considerable importance to an exchange of ideas with knowledgeable persons in AID, the World Bank, the International Food Policy Research Institute, ILO, WHO, and FAO. To a

considerable extent this would be a continuation of discussions of these issues with individuals in those agencies which has been underway for several years. For example, Johnston took advantage of a recent ILO assignment to Tanzania to make stopovers in Rome, Geneva, and Washington to obtain recent documentation and for conversations at FAO, ILO, WHO, the World Bank, and AID concerning rural development strategies and basic needs. It is envisaged that a preliminary and incomplete draft of our state of the art paper will be sent to appropriate persons in those agencies by July of 1978 and that Johnston and Das Gupta will visit Washington, Geneva, and Rome in August to discuss that draft prior to completing the final version of the paper.

Perhaps even more important is the need to have some exchange of ideas with a limited number of competent and experienced individuals actively involved in development planning in at least a few developing countries. Because of the time constraint we propose to limit ourselves to three countries--the Philippines, India, and Kenya. The choice of countries is indicated by our previous study of rural development issues in those countries and by the fact that we know senior policymakers in each of the countries who would be willing to discuss these issues with us in an informal and scholarly way. Those visits will also provide an opportunity for discussions with AID mission directors and other members of the country team and will make it possible for us to obtain up-to-date documentation on country programs and policy statements relevant to our state of the art paper.

We also attach importance to the participation of an informal advisory committee of Stanford faculty members that would provide additional competence in the fields of agricultural production economics, demography, nutrition, and health. This group would consist of Professors Carl Gotsch, Dudley Kirk, and Reynaldo Martorell in the Food Research Institute and

Professor Keith Taylor in the Stanford School of Medicine. Their qualifications are summarized in the following section.

The budget for this work is presented on the last page of this Proposal.

IV. BACKGROUND AND QUALIFICATIONS OF THE INVESTIGATORS

The proposal for a state of the art paper as outlined in the preceding section clearly represents a very ambitious undertaking. We are nevertheless confident that it will be possible to produce a document of practical value to AID and other foreign assistance agencies because of the extent to which this exercise will build on previous work of the two investigators. We also attach considerable importance to the value of the proposed collaboration between an agricultural economist familiar with the economic and technical aspects of rural development and a political scientist with a thorough command of the literature on the politics of development and considerable understanding of development planning and the political process in developing countries (and especially in India).

Bruce Johnston is a professor in the Food Research Institute at Stanford University. He has concentrated on research and teaching related to problems of rural development in Asia and Africa and has made a number of study and official visits to countries in those regions. He has served as a consultant to FAO, ILO, the World Bank, the Asian Development Bank, and other organizations. In the summer of 1977 he served as a member of an ILO Employment Advisory Mission to the government of Tanzania, and in 1976 he participated in the work of a task force which carried out the Second Asian Agricultural Survey under the auspices of the Asian Development Bank. He was chairman of the 9th Session of the Joint FAO/WHO Expert Committee on Nutrition and served as rapporteur in preparing the report on

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Food and Nutrition Strategies in National Development published in 1976 by FAO and WHO. Prior to that, he collaborated with a nutritionist, Dr. Peter Greaves, in preparing an FAO Manual on Food and Nutrition Policy (1969). Since 1972 he has served as a member of the Steering Group for the ILO Technology and Employment Programme. In the mid-1960s he served as chairman of a subcommittee of the Social Science Research Council Committee on Agricultural Economics that was responsible for the preparation of a symposium volume on Agricultural Development and Economic Growth (1967). His periods of residence overseas include an 18-month assignment in 1974 and 1975 as a visiting professor in the Institute for Development Studies at the University of Nairobi under the auspices of the Rockefeller Foundation.

The attached c.v. includes a listing of Johnston's major publications. Of particular relevance to the present proposal are a 1970 article, "Agriculture and Structural Transformation: A Survey of Research" and a 1977 survey article on "Food, Health, and Population in Development Strategies," both published by the American Economic Association's Journal of Economic Literature.

Jyotirindra Das Gupta has been a member of the Department of Political Science, University of California, Berkeley since 1966. He has done extensive work on policy planning related to political and economic development in poor countries. His book on Language Conflict and National Development (1970) is a study of interest groups and their impact on policymaking in India. From 1971 to 1974 he worked with an International Language Planning Research Group in carrying out a cross-national, interdisciplinary study of development planning devoted to changing the medium of instruction and communication in India, Israel, and Indonesia. The various publications

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resulting from that project, which was carried out with support from the Ford Foundation, are reported in the attached c.v.

Das Gupta's current research and teaching focus is on the political processes involved in economic development. A major paper on the impact of emergency regimes on development in India, South Korea, and the Philippines is to appear in Asian Survey. A paper on regional control of resources and its bearing on rural levels of living was published in the Annals of the American Academy of Political Science (September 1977) and a paper on political regimes and rural development will be published in a forthcoming book on Political Aspects of the World Food Problem. He has had extensive field work experience in India and speaks and reads several languages current in India and Bangladesh.

Carl Gotsch, associate professor in the Food Research Institute, has specialized in research and teaching in agricultural production economics. This has included considerable research and farm survey work in Pakistan and shorter periods of field research in Egypt and other countries in the Middle East. He spent a number of years in teaching, research, and advisory work in the Economics Department and Development Advisory Service at Harvard prior to an assignment with the Arid Land Development Program (ALAD), based in Lebanon and Jordan, and joined the Stanford faculty in September 1976. Dudley Kirk, the Morrison Professor of Population Studies, is a distinguished demographer who served for twelve years as director of the Demographic Division of the Population Council before joining the Food Research Institute. His research has centered on the interrelationships between population growth and social and economic development. Reynaldo Martorell, Associate Professor of Nutrition, joined the Food Research Institute after five years of research with the Institute for



Nutrition in Central America and Panama (INCAP). His research and teaching is continuing a focus on techniques for evaluating nutritional status, the consequences of nutritional deficiencies, and the effects of nutrition interventions. Martorell's experience in connection with INCAP's field studies related to the assessment of nutritional status, the consequences of various nutritional deficiencies, and of interactions between nutrition and infection is especially relevant to some of the issues that we will be examining. Keith Taylor, Barnett Professor of Medicine in Stanford University's School of Medicine, is a specialist in gastroenterology. His research interests are in the immunological and nutritional aspects of gastrointestinal disease, and his research and teaching have included a strong orientation toward the health and nutrition problems of developing countries.